

# PSG3 (PM) Modular Feeder

corrosion resistant,  
for use in circulating-oil lubrication systems



## Application

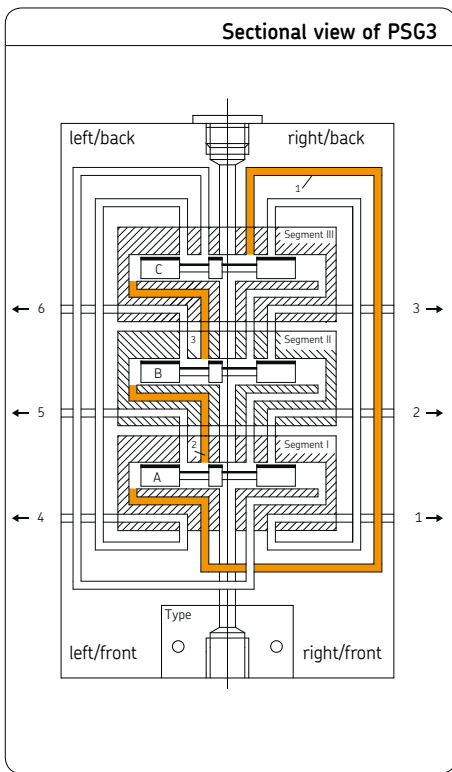
Corrosion-resistant designed modular Feeders of the PSG3 (PM) series are used in circulating-oil lubrication systems. Applications include, for example, paper machinery and general engineering.

## Advantages

- Modular feeders of the PSG3 (PM) series are designed with nickel-plated sections on an anodized baseplate for better corrosion-resistance.
- Modular feeder technology is easy to service through baseplate design.
- Outlet quantities are especially easy to allocate because the lubricant outlets are located directly below the metering piston.
- High overall flow volume of up to 6 l/min
- Flexible system design due to metering sections with volumes per cycle and outlets of 800, 1600, 2400 and 3200 mm<sup>3</sup>.
- Up to 20 outlets
- Measurement connectors for system pressure and feeder outlets
- Retrofitting with piston detectors for monitoring is possible at any time
- It is possible to increase the metering volume through an internal consolidation of opposite outlets

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General information

The PSG3 (PM) modular feeder (Progressive feeder) can be used for an inlet volume flow of up to 6 l/min. The inlet and all outlets of the feeder are located in the baseplate. The functional sections are attached to the baseplate and can be replaced without loosening the tubing.

The volumetric flow which is sent via a tube is forcibly distributed in a predetermined ratio to the outlets, i.e. to the lubrication points or the downstream progressive feeders. Pistons, which are aligned in series, meter the lubricant for two opposite outlets each and control the function of the neighboring piston. This way, the function of the modular feeder can be checked by monitoring **any** piston (with a cycle indicator or piston detector) or the inlet volume flow (with gear-type flow indicator) can be monitored.

Mode of operation

Observation of the movements beginning with the moment that all three pistons (**A, B, C**) on the left end stop shows that the lubricant and operating pressure reach from the inlet through the through-duct to the pistons **C-right, B-right** and **A-left**; that is, while pistons **C** and **B** retain their positions, the **A** piston is pushed right. The lubricant volume specified by the piston diameter and stroke is pressed into a duct on whose end (outlet 4) the same quantity exits. This stroke movement of piston **A** opens or closes multiple control ducts. Control duct 2, through which the lubricant reaches piston **B-left** and shifts it right, is now open. The corresponding metering volume is pressed into the outlet duct and exits at outlet 2. The stroke movement of piston **B** has now closed or opened control ducts. Control duct 3 is now open. The lubricant pressure moves piston **C** to the right, pushing the corresponding metering volume into the duct to outlet 3. This movement of piston **C** opens, among others, the reversing duct that reconnects the through-duct with piston **A-right**.

Analogous to the piston movement just described, pistons **A, B** and **C** now move consecutively back to the left.

See important product usage information on the back cover.

### Operating pressure

The maximum permissible operating pressure of the modular feeder is 200 bar.

### Operating temperature

The maximum permissible operating temperature of the feeders in the standard range, without attachments, is 110 °C.

### Consolidation of outlets

The volumetric flow of an outlet can be doubled by internal consolidation of two opposite outlets. To do this, the threaded pin **G** in the baseplate -- the right input as seen from the feeder inlet -- must be screwed out. The outlet in the baseplate that is no longer needed is to be closed using a washer **D** and a screw plug **V**.

### Dummy section

Dummy and functional sections can be varied as desired within the frame size (a minimum of three functional sections are required per feeder). If dummy sections are installed, two lubricant outlets each must be closed in the baseplate (under the dummy section). Increased pressure loss must be expected if two dummy sections are installed side-by-side or if dummy sections are used as the start or end section.

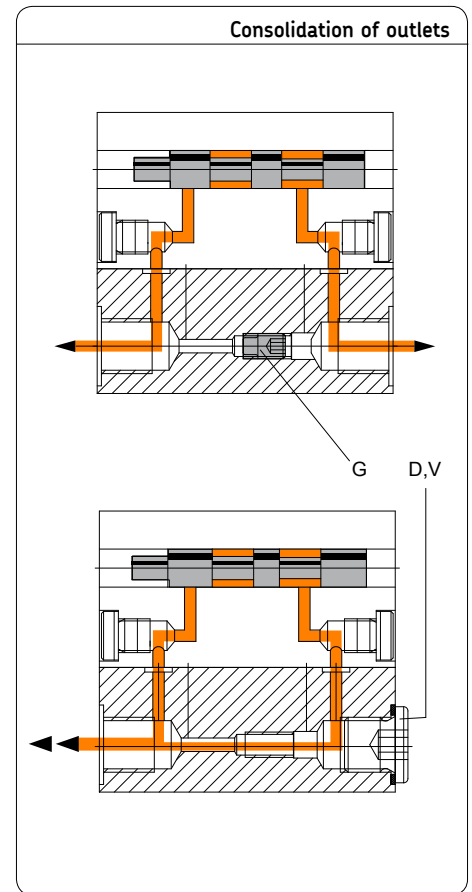
### Information on the design

The general criteria for the design of progressive feeders also apply, without restrictions, to the PSG3 modular feeder. The stroke rate is the most important criterion. It should be held as low as possible by selecting high-volume sections. This reduces pressure losses and noise levels. In case of an installation on movable machine parts or in case of strong vibrations, the piston position of the feeder **must not** correspond with the direction of movement of the machine part.

### Tightening torque of the sections

When installing PSG3 sections on the baseplate, the following tightening torque must be complied with:

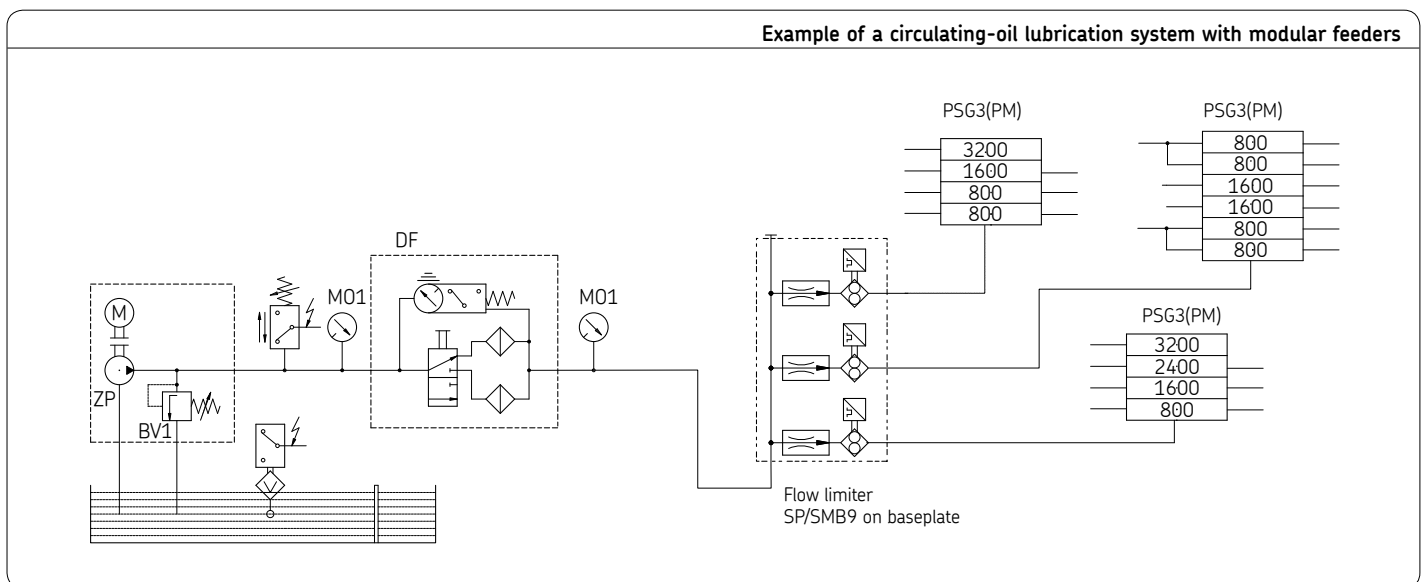
**Section tightening torque: 23 Nm**



### Note

The piston detector is designed for a service life of approx. 10-15 million cycles. This value may be significantly exceeded, depending on the application, external environmental influences, medium, pressure, and cycle speed.

Please consult the manufacturer if you have questions in this regard.

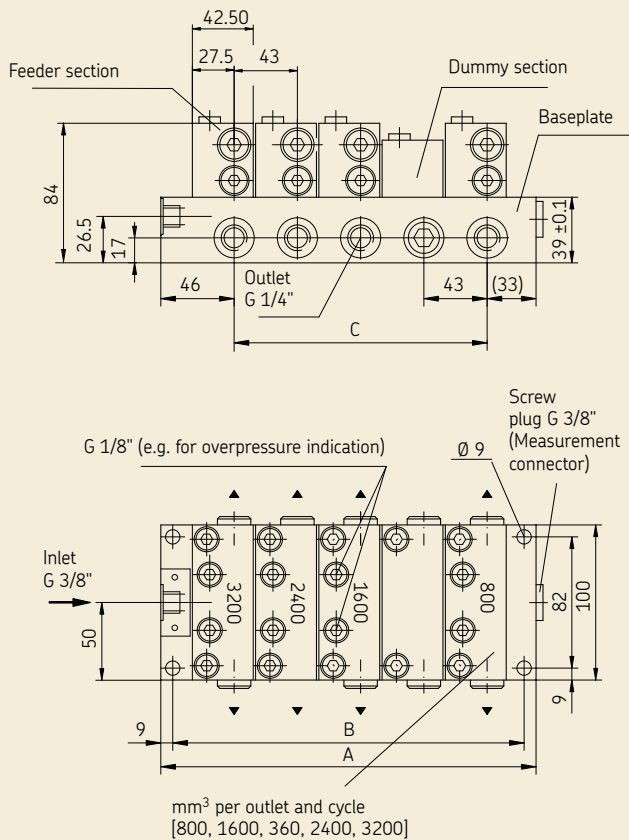


# PSG3 (PM) Modular Feeder

for oil without attachments, without monitoring



PSG3 (PM) Modular Feeder



## Technical Data

### General information

Type ..... hydraulically controlled  
 Mounting position ..... discretionary <sup>1)</sup>  
 Ambient temperature range - 15 to + 110 °C  
 Baseplate with ..... 6, 8, 10, 12, 14, 16, 18, 20 outlets  
 Used outlets ..... 3 to 20

### Material

Baseplate ..... Al Cu Mg Pb F 38, anodized  
 Sections ..... Free cutting steel, 9SMn24KG,  
 chemically nickel-plated

### Hydraulic

Operating pressure max. .... 200 bar  
 Inlet volume flow ..... up to 6 l/min  
 Volume per outlet and cycle . 800-, 1600-, 2400-, 3200 mm<sup>3</sup>  
 Dividing ratio ..... 1 : 1 to 1 : 4 <sup>2)</sup>  
 Pressure difference..... 5 to 15 bar <sup>3)</sup>  
 Lubricant ..... mineral oils, environmentally friendly and  
 synthetic oils  
 Operating viscosity ..... > 12 mm<sup>2</sup>/s

- 1) In case of an installation on movable machine parts or in case of strong vibrations, the piston position of the feeder **must not** correspond with the direction of movement of the machine part.
- 2) Larger dividing ratios are possible when consolidated.
- 3) Depending on volume index and viscosity and volumetric flow.

## Dimensions

Number of weight Sections	Dim. A [mm]	Dim. B [mm]	Dim. C [mm]	Complete [kg]
3	165	147	2 x 43 = 86	6.83
4	208	190	3 x 43 = 129	8.55
5	251	233	4 x 43 = 112	10.27
6	294	276	5 x 43 = 140	11.99
7	337	319	6 x 43 = 168	13.71
8	380	362	7 x 43 = 196	15.43
9	423	405	8 x 43 = 224	17.15
10	466	448	9 x 43 = 252	18.87

## Accessories and spare parts

				Accessories
Designation	Number of Sections	Volume per cycle and cycle [mm <sup>3</sup> ]	Order no.	Weight [kg]
<b>Baseplate complete</b>	3		24-0714-3330	1.60
Inlet thread G 3/8"	4		24-0714-3331	2.02
Outlet thread G 1/4" <sup>1)</sup>	5		24-0714-3332	2.42
	6		24-0714-3333	2.83
	7		24-0714-3334	3.24
	8		24-0714-3335	3.64
	9		24-0714-3336	4.08
	10		24-0714-3337	4.54
<b>Feeder section complete</b>		800	24-2151-4274	1.31
prepared for the		1600	24-2151-4275	1.31
Piston detector assembly		2400	24-2151-4276	1.31
Monitoring type: P3		3200	24-2151-4277	1.31
<b>Complete dummy section without screw plug for baseplate</b>			24-2151-4212	0.50

<sup>1)</sup> UNF thread on request

		Accessories/spare parts
Designation		Order number
<b>Piston stop screw,</b>		44-1855-2106
<b>Screw plug</b> for baseplate outlet G 1/4"		99-0014-0908
<b>Washer</b> for screw plugs G 1/4"		95-0713-7603
<b>Baseplate O-ring, Note! 9 O-rings are required for one section</b>		96-9026-0062

## Key to order codes

### Design

PSG 3 / 04 05 / 00-00 / 00 A 1 - 3200 - 2400L - X - 800 - ... - ... - ... - 4007

PSG3(PM) Progressive modular feeder on baseplate

Size 3:  
max. 6 l/min

#### Baseplate size

- 03 = for 3 sections (max. 6 outlets)
- 04 = for 4 sections (max. 8 outlets)
- 05 = for 5 sections (max. 10 outlets)
- 06 = for 6 sections (max. 12 outlets)
- 07 = for 7 sections (max. 14 outlets)
- 08 = for 8 sections (max. 16 outlets)
- 09 = for 9 sections (max. 18 outlets)
- 10 = for 10 sections (max. 20 outlets)

#### Number of occupied outlets

- 03 = 3 outlets open
- ↓
- 20 = 20 outlets open

#### Monitoring type

- 00 = without
- P3 = piston detector, 3-pin connection

#### Installation position of the monitoring system

- 1R = right side on first section
- 1L = left side on first section
- 2R = right side on second section
- ↓
- 0R = right side on 10th section
- 0L = left side on 10th section

1- to max. 10 sections →

chemically nickel-plated

4<sup>th</sup> section <sup>1)</sup>  
800 mm<sup>3</sup>/stroke  
left outlet: 1600 mm<sup>3</sup>/cycle  
right outlet: 1600 mm<sup>3</sup>/cycle

Dummy section  
left and right outlet closed

2<sup>nd</sup> section <sup>1)</sup>  
Baseplate:  
2400 mm<sup>3</sup>/stroke  
left outlet: 2x2400 mm<sup>3</sup>/cycle  
right outlet: closed

1<sup>st</sup> section <sup>1)</sup>  
Baseplate:  
3200 mm<sup>3</sup>/stroke  
left outlet: 3200 mm<sup>3</sup>/cycle  
right outlet: 3200 mm<sup>3</sup>/cycle

- 1 = Basic design:  
Inlet G 3/8"  
Outlet G 1/4"
- 2 = UNF version:  
Inlet G 3/4-16 UNF - thread  
Outlet 9/16-18 UNF - thread

A = change version

#### Attachments

00 = without attachments

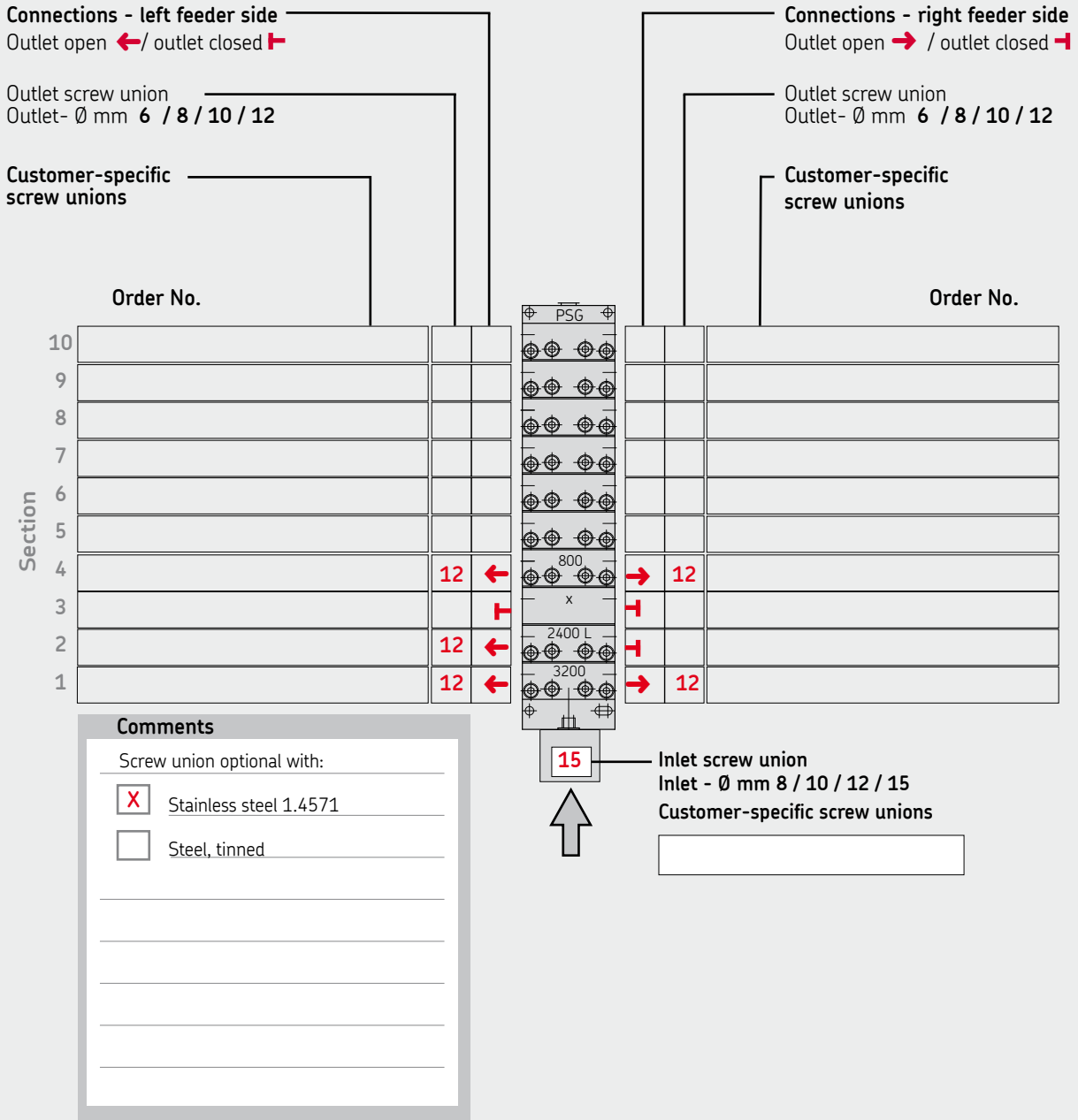
- 1) The sections are available in volumes per outlet and cycle of 800, 1600, 2400 and 3200 mm<sup>3</sup> (volume index).
- 2) Attachment is made on the left or right from the second to second-to-last section.

#### Example::

Progressive feeder, type PSG3 with a max. flow rate of 6 l/min. (PSG3), baseplate for 4 sections (04), with 5 occupied outlets (05), without monitoring (00), without attachments (00), change version A (A), Grundversion, G 3/8" inlet thread (1), 1st section with 3200 mm<sup>3</sup>/stroke (3200), 2nd section 2400 mm<sup>3</sup>/stroke, right outlet closed (2400L), 3rd section dummy section (X), 4th section with 800 mm<sup>3</sup>/stroke (800). (The baseplate can be delivered with max. 10 sections with 800, 1600, 2400 or 3200 mm<sup>3</sup>/stroke. The last digits 4007 (4007) stands for corrosion-resistant design. The following screw unions have been allocated to the progressive feeder, as seen from the inlet (see page 7).

# Key to order codes

## Attachments and screw unions



Inlet screw union = with Ø 15 mm (15),  
 1st section = outlet screw union on both sides with Ø 12 mm (12),  
 2nd section = outlet screw union on left with Ø 12 mm (12), right side closed (2400L),  
 3rd section = dummy section (X)  
 4th section = outlet screw union on both sides with Ø 12 mm (12)

Order Form     Inquiry Form

Please arrange the following order code according to the sample of the order code explanation!  
**Note!** The actual order number will be allocated after the order has been placed.

### Configuration - order code PSG3 (PM)

PSG 3 / 04 05 / 00-00 / 00 A 1 - 3200 - 2400L - X - 800 - .... - ... - .... - .... - ... - 4007

PSG3 / .. ... / ... - ... / ... A .. - .... - .... - .... - .... - .... - .... - .... - .... - .... - 4007

**Connections - left feeder side**  
 Outlet open ← / outlet closed ▬

Outlet screw union  
 Outlet- Ø mm 6 / 8 / 10 / 12

Customer-specific screw unions

**Connections - right feeder side**  
 Outlet open → / outlet closed ▬

Outlet screw union  
 Outlet- Ø mm 6 / 8 / 10 / 12

Customer-specific screw unions

Order No.

10			
9			
8			
7			
6			
5			
4			
3			
2			
1			

Order No.

10			
9			
8			
7			
6			
5			
4			
3			
2			
1			

**Comments**

Screw union optional with:

Stainless steel 1:4571

Steel, tinned

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**Inlet screw union**  
 Inlet - Ø mm 8 / 10 / 12 / 15  
 Customer-specific screw unions

Company: ..... Address: ..... Reference: .....	Name: ..... Function/dept.: ..... Phone: ..... Fax/E-Mail: .....
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## PSG3 (PM) Modular Feeder

The configuration of a PSG3 progressive feeder is customer-specific. The most important data for the generation of an order number are summarized on pages 6 and 7. As an illustration, an example of an order has been added on page 7.

### Please read the pages 6 and 7 thoroughly!

An order / inquiry form is located on the inside of this leaflet.

Please fill this in according to the sample on page 7, whereby the blank line PSG3/... (configuration) must be completed according to the sample on page 6 and the graphic below according to the sample on page 7.

### Note!

The configuration of a modular feeder (and thereby its order code) always starts at the baseplate inlet section.

**First, copy the order sheet (page 8), then complete the copy and send it to the following address:**

**SKF Lubrication Systems Germany AG**  
2. Industriestrasse 4  
68766 Hockenheim  
Germany

Tel. +49 (0)62 05 27-0  
Fax +49 (0)62 05 27-101

[www.skf.com/lubrication](http://www.skf.com/lubrication)

**Please complete your address here:**

Company: \_\_\_\_\_

Address: \_\_\_\_\_

Reference: \_\_\_\_\_

Name: \_\_\_\_\_

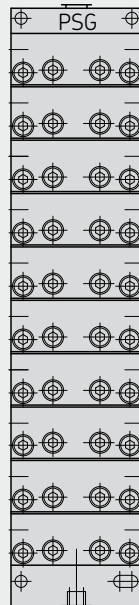
Function/dept.: \_\_\_\_\_

Phone: \_\_\_\_\_

Fax: \_\_\_\_\_

E-mail: \_\_\_\_\_

## Additional amendments or remarks:



**Order No. 1-3011-EN**

Subject to change without notice! (07/2009)

**Important product usage information**

All products from SKF may be used only for their intended purpose as described in this brochure and in any instructions. If operating instructions are supplied with the products, they must be read and followed.

Not all lubricants are suitable for use in centralized lubrication systems. SKF does offer an inspection service to test customer supplied lubricant to determine if it can be used in a centralized system. SKF lubrication systems or their components are not approved for use with gases, liquefied gases, pressurized gases in solution and fluids with a vapor pressure exceeding normal atmospheric pressure (1013 mbars) by more than 0.5 bar at their maximum permissible temperature.

Hazardous materials of any kind, especially the materials classified as hazardous by European Community Directive EC 67/548/EEC, Article 2, Par. 2, may only be used to fill SKF centralized lubrication systems and components and delivered and/or distributed with the same after consulting with and receiving written approval from SKF.

**Brochure note**

- 1-3013-EN Progressive modular feeder PSG2
- 1-3014-EN Progressive modular feeder PSG3
- 1-3015-EN Progressive sectional feeder VP
- 1-3016-EN Progressive sectional feeder VPK
- 1-3017-EN Progressive block feeder VPB
- 1-3029-EN Progressive block feeder SPVS

**SKF Lubrication Systems Germany AG**

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